

PRODUCT NAME: **EXOWELD™ LIGHTER FLINTS**
SDS DOCUMENT NUMBER: **EXO-QM-QD-SDS-LF**

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1 - IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY

PRODUCT IDENTIFIER

Product Name: Exoweld™ Lighter Flint
Chemical Formula: Main ingredients utilised are Cerium, Lanthanum, Neodymium, Praseodymium (Rare Earth Metals/Mischmetal) , Iron and Magnesium
Product Description: Cylindrical pellets

RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Application: Utilised as an ignition source for Exothermic Weld Powder

DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Manufacturer: Exoweld (Pty) Ltd
416 Heidelberg Road, Tulisa Park, Johannesburg 2197
Republic of South Africa
Tel: +27 (0) 11 907 1355

Emergency Telephone: Bruno Tranchina | Exoweld Director
083 263 6004 South Africa
+27 (0) 83 263 6004 International



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2 - HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Product classification: Flint - Ferrocium

LABEL ELEMENTS (PICTOGRAMS): Not applicable

HAZARD STATEMENTS

Mischmetal (made up of Cerium, lanthanum, Neodymium and Praseodymium) Chronic exposure to mischmetal may decrease the coagulatory properties of the blood and, therefore, can delay blood clotting and hemorrhaging may result. Cerium may cause polycythemia (overabundance of red blood cells). Acute exposure may yield flu-type symptoms several hours after exposure. Signs and Symptoms of exposure include flu-type symptoms consisting of chills and fever occurring several hours later. Rare Earth metal fumes affect the central nervous system similar to that of an extensive welding operation

Magnesium: Chronic exposure to magnesium or oxide dust should be a low health risk by inhalation and should be treated as nuisance dust. Exposure to magnesium and oxide fume dust burning can result in metal fume fever, similar to but milder than that induced by zinc oxide fumes. Temporary symptoms can include fever, chills, nausea, vomiting and muscular pain. Onset of symptoms occur 4 – 12 hours after exposure and is usually complete in 24-48 hours.

Iron Metal: Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

PRECAUTIONARY STATEMENTS

Prevention: Use protective gloves when handling powder or dust
Use safety glasses to prevent contact irritation
Appropriate clothing to protect against physical hazards
General work / safety hygiene procedures

Storage: In a clean, dry area

Disposal: In accordance with appropriate Federal, State and Local Regulations

OTHER HAZARDS

Exposure to reaction by-products: [See section 8](#)



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Chemical name	CAS No.	%
Cerium	7440-45-1	39%
Lanthanum	7439-91-0	18%
Neodymium	7440-00-8	14%
Praseodymium	7440-10-0	7%
Iron (Oxide fume)	7439-89-6	20%
Magnesium (Oxide fume)	7439-95-4	2%

Other: The full text for all hazard statements is displayed in [Section 15](#).

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4 - FIRST AID MEASURES

DESCRIPTION OF FIRST AID MEASURES

- Inhalation:** Remove victim from fumes and seek medical attention.
If not breathing, give artificial respiration
If breathing is difficult, give oxygen, get medical attention
Inhalation of material in powder form may cause irritation
In the presence of dust or powder use a NIOSH approved respirator
- Skin Contact:** Wash with soap and water.
Remove contaminated clothing and launder.
May cause irritation due to abrasion. Get medical attention if irritation develops
- Eye Contact:** Check for and remove any contact lenses
Remove particles from eye and flush with large amounts of fresh water for at least 15 mins.
May cause irritation due to abrasion. Get medical attention if irritation occurs
- Ingestion:** Give one or two glasses of milk. Seek medical aid. No adverse effects expected under normal usage
- Notes to physician:** Not applicable
- Other: See information on toxicological effects in [Section 11](#).



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5 - FIREFIGHTING MEASURES

SPECIFIC HAZARDS None

EXTINGUISHING MEDIA

Extinguishing Media: Ferro Cerium (lighter pellets) is flammable in powder form as are most metals i.e. Aluminium and Magnesium. In pellet form it is however not flammable and although, in fact, the auto-ignition point is specified by the manufacturer to be 900°F / 482°C, these pellets have been subject to 1700°F / 926°C over a prolonged period of time without flammability or deterioration.

ADVICE FOR FIREFIGHTERS None

OTHER INFORMATION None

6 - ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Personal Precautions: Refer Section 7

Respiratory Protection: Use protective gloves when handling powder or dust
Use safety glasses to prevent contact irritation
Protective

ENVIRONMENTAL PRECAUTIONS

Environmental Precautions: Not available

METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Spill Clean-up Methods: Avoid crushing pellets into dust.
Striking with metallic objects may cause sparking
Avoid exposure to acid
Avoid contact with water in the presence of powder or dust

REFERENCE TO OTHER SECTIONS

Other: For personal protection, see [Section 8](#).
For waste disposal, see [Section 13](#).



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7 - HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

Safe Handling Advice: Wash hands after handling, before eating
Avoid inhalation of dust
Avoid skin contact with dust
Do not ingest

Technical Measures:

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Safe Storage Advice: Prolonged exposure to moisture may cause pellets to degenerate into powder

Storage Conditions: Store in a dry clean area

8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limit Values:

Ingredient	Weight	CAS-No.	Exposure limit (mg/m ³)	
			OSHA PEL (USA) OSH (RSA)	ACGIH TLV
RARE EARTH METALS / MISCHMETAL Cerium Lanthanum Neodymium Praseodymium	78	7440-45-1 7439-91-0 7440-00-8 7440-10-0	N/A	N/A
IRON	20	7439-89-6	10	5
MAGNESIUM	2	7439-95-4	15	10

EXPOSURE CONTROLS

This section covers the materials from which these products are manufactured. The fumes and gases produced during normal use of these products are covered by section 4. The term hazardous materials should be interpreted as a term required and defined in OSHA Hazard Communication Standard 26 CFR 1910.1200 (USA); Section 43 of the Occupational Health and Safety Act (Act No. 85 of 1993) (RSA) and does not necessarily imply the existence of hazard.



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9 - PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Cylindrical pellets
Colour:	Gun metal grey
Odour:	Odourless
Odour threshold:	Not applicable
pH:	Not available
Melting point / freezing point:	2000°F / 1093°C – Freezing point (not available)
Boiling point:	6800
Flash point:	None
Evaporation point:	Not applicable
Flammability (solid, gas):	Not available
Upper flammable limit	Not available
Lower flammable limit	Not available
Vapour pressure:	Not applicable
Vapour density (air=1):	Not applicable
Relative density (water=1)	Not available
Solubility (in water):	Insoluble
Partition coefficient (n-octanol / water):	Not available
Auto-ignition temperature:	900°F / 482°C
Decomposition temperature:	Not available
Specific Gravity:	6.35
Kinematic viscosity:	Not available
Kst:	Not available
MIE:	Not available



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10 - STABILITY AND REACTIVITY

CHEMICAL STABILITY

Reactivity: Stable

Stability: Stable

POSSIBILITY OF HAZARDOUS REACTIONS

Hazardous Reactions: One recommended way to determine the composition and quantity of fumes to which workers are exposed is to take an air sample inside the welder's helmet if worn, or in the workers breathing zone.

CONDITIONS TO AVOID

Conditions / materials to avoid: Acids, Strong Oxidisers, Strong Bases, Halogens, Phosphorus, Sulfer
Pellets will degenerate into powder over an extended period of time, usually measured in years. The presence of moisture accelerates this deterioration. The pellets are coated with a moisture resistant lacquer to extend shelf life. It is recommended pellets be disposed of if they show signs of deterioration as the resulting powder is flammable.

INCOMPATIBLE MATERIALS

Incompatible materials: Not available

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous decomposition products: None

11 - TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

Not available

CARCINOGENICITY

Mischmetal (including individual components), Magnesium and Iron have not been identified as known or suspected carcinogens by NTP, LARC or OSHA

13 - DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS Refer to Federal, State and Local Regulations



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14 - TRANSPORT INFORMATION

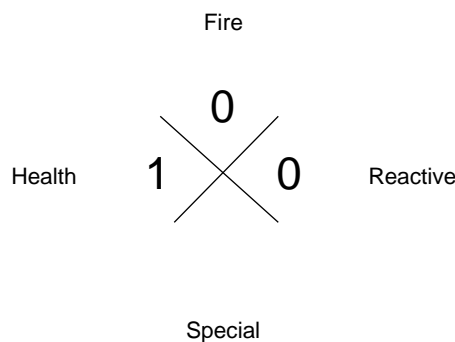
LOCAL / INTERNATIONAL TRANSPORT REGULATIONS

Ferrocium in SOLID pellet form with a lacquer coating is not classified as a dangerous good.
Federal DOT also classifies Ferrocium as non hazardous.

15 - REGULATORY INFORMATION

SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

NFPA	Hazard rating
0	Insignificant
1	Slight
2	Moderate
3	High
4	Extreme



Local Regulations: Hazardous Chemical Substances Regulations, 1995. Department of Labour Republic of South Africa, Section 43 of the Occupational Health and Safety Act of 1993

Foreign Regulations: Safety Health and Environmental Regulations / Legislation Specific for the substance or mixtures. EC Regulation (EC) No. 1907/2006 (REACH)
American Conference of Governmental Industrial Hygienists, Threshold Limit Value Tables
Occupational Safety and Health Standards, Part 1910, Air Contaminates, Respiratory Protection and Hazard Communication



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16 - OTHER INFORMATION

(The information on this data sheet represents the most current data available to Exoweld (Pty) Ltd. All information is adequate to offer protection for all normal use as well as use of properly stored product, by properly trained personnel).

The user is responsible for determining whether the product is fit for a particular purpose and suitable for the users method of use or application. Given the variety of factors that can affect the use and application of a Butyl Seal product, some of which are uniquely within the users knowledge and control, it is essential that the user evaluate the Butyl Seal product to determine whether it is fit for a particular purpose and suitable for the users method of use or application.

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